



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,238	11/30/2001	Kwang Il Lee	K-0344	2515
34610	7590	06/28/2005	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			HEINRICHS, CHRISTOPHER P	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/997,238

Applicant(s)

LEE

Examiner

Christopher P. Heinrichs

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2004.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-21, 23-26 and 28-30 is/are rejected.
7) ☒ Claim(s) 15, 22 and 27 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 30 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 15 objected to because of the following informalities: line 1 of the third paragraph reads "configured to separate or of the generated..." and the "or of" in this line is used in a confusing fashion. Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 and 6-14, 26, and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,953,339 to Baldwin et al.
3. Regarding claims 1-3, Baldwin discloses a cell switching system in a communication system using an asynchronous transfer mode (ATM) (fig 9) comprising a first converter configured to extract AAL2 type common part sublayer packets (col 4 lines 27-31) by demultiplexing a received AAL2 type ATM cell (fig 9 item 705-1, col 8 line), and generate an AAL5 type (col 9 lines 19-27) ATM cell (col 8 lines 55-56) in accordance with a first transforming information for the extracted AAL2 type CPS packets (VPI/CI values and CID, col 8 line 63, and "Incoming", col 7 line 60 – col 8 line

Art Unit: 2663

30), and a second converter (fig 9 item 715-2) coupled to the first converter (via fig 9 item 710) and configured to generate an AAL2 CPS packet from AAL5 type ATM cell (col 9 lines 10-12) in accordance with a second transforming information (VPI/VC values for AAL5 type ATM cell, col 7 line 60 col 8 line 30 reference, but "Outgoing" as adjusted as set forth in col 9 line 27) and generate an AAL2 ATM cell by multiplexing the generated AAL2 CPS packet with other AAL2 CPS packets (col 9 lines 7-9). The first table of claim 3 is the "Incoming" table of fig 7, and the second table of claim 3 is the "Outgoing" table of fig 7.

4. With regard to claim 4, Baldwin discloses all aspects of the invention of claim 1 and further discloses that the second converter receives the AAL5 type ATM cell from one of the first converter and an external source, specifically the first converter via the ATM switch which is external to the second converter, as described in the cited references in the rejections of claims 1-3.

5. With regard to claim 6, Baldwin discloses all aspects of the invention of claim 1 and further discloses a third converter (fig 9 item 705-3) and a fourth converter (fig 9 item 715-3) which perform the same functions as the first and second converters, respectively, which are disclosed in the system of claim 6.

6. With regard to claims 7-9, Baldwin discloses all aspects of the invention of claim 7 as set forth in the rejections of claims 1-4 and 6, with the addition of a first table (fig 7

Art Unit: 2663

in its entirety, for fig 7 item 705-1) and a second table (fig 7 in its entirety, for fig 7 item 705-2) but with the CID removed for those table sections corresponding to AAL5 type ATM cells, as set forth in col 9 lines 19-27. The table performs the mappings as set forth in col 7 lines 36 – 56.

7. With regard to claims 10 and 11, Baldwin discloses all aspects of the invention of claim 7 and further discloses, via description of operation of the TA units, the AAL2 receiving unit (port on incoming side of the col 7 lines 36 – 56 reference), transmitting unit (port for outgoing side of col 7 lines 36 – 56 reference) and the logical coupling between the table and the ports, as the tables contain port numbers. Baldwin discloses the invention of claim 11 using one of fig 9 items 705-1, 705-2, or 705-3, operating in the reverse direction flow as set forth in the rejection of claim 1.

8. With regard to claim 12-14, Baldwin discloses all aspects as set forth in the rejections of claims 7-11, as well as the further limitations of claim 12 of a third converter (fig 9 item 705-3) and a fourth converter (fig 9 item 715-3), which operate in the same fashion as the first converter (fig 9 item 705-1) and second converter (fig 9 item 705-2), respectively, thereby disclosing all aspects of the inventions of claims 12-14.

9. With regard to claim 26, Baldwin discloses an apparatus that performs the method steps, except for the generation of a second AAL2 CPS packet, as set forth in

Art Unit: 2663

the rejection of claim 7, wherein the apparatus is the first converter. Baldwin also discloses the step of generating a second AAL2 CPS packet by allocating a third VP/VC and second CID to separated data instead of the second VP/VC and generating an AAL2 ATM cell by multiplexing a plurality of AAL2 CPS packets, as would be performed by converter 705-3 for AAL2 data traveling in the reverse direction as data through the first converter.

10. With regard to claims 28-30, Baldwin discloses receiving (by fig 9 item 705-1, working in the opposite direction as described in col 9 lines 10-11), an AAL5 ATM cell from an AAL2/AAL5 converter (fig 9 item 715-2, working as described in col 9 lines 19-27, in the opposite direction as described in col 9 lines 10-11), which is a multiplexer/demultiplexer (col 9 lines 7-10 describes that this device is a multiplexer, and lines 10-11 describe that these converters work in the other direction so this device must also demultiplex) source external to item 705-1 of fig 9. Because it works in the opposite direction, item 705-1 of fig 9 must also perform the rest of the method steps of claim 28 as set forth in the rejection of claim 26.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 5, 15-21, and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,953,339 to Baldwin et al.

4. With regard to claim 5, Baldwin discloses the invention of claim 4, and specifically, as set forth in the rejection of claim 1, discloses that the ATM cell is multiplexed and demultiplexed, but fails to disclose that the source contain a multiplexer/demultiplexer. However, it would have been obvious to one ordinarily skilled in the art at the time of the invention to include a multiplexer/demultiplexer in the external source of claim 4. The motivation to do so would have been that traffic can pass in both directions, as set forth in col 9 lines 10-11, so a bidirectional ATM cell device that performed both multiplexing in one direction and demultiplexing in the other would need a multiplexer/demultiplexer for traffic to pass through it.

5. With regard to claim 15, Baldwin discloses all aspects of the invention of claim 15 as set forth in the rejection of claim 7 with the exception of the explicit disclosure of the

Art Unit: 2663

multiplexer/demultiplexer of claim 15. However, as set forth in the rejection of claims 1,5, and 7 the external source of said rejection is the first converter which performs multiplexing and demultiplexing as set forth in said rejection. It would therefore have been obvious to one ordinarily skilled in the art to include a multiplexer/demultiplexer with the system as disclosed by Baldwin in the rejection of claim 7 to arrive at the invention of claim 15. The motivation to do so would have been to provide some physical means of performing the multiplexing/demultiplexing as disclosed by Baldwin, as they are not passive or self-executing operations, as one ordinarily skilled in the art would recognize.

6. With regard to claims 16 and 17, Baldwin discloses the invention of claim 15 and further discloses the elements of the claims 16 and 17 as shown in mapping table of fig 7 and set forth in the rejection of claims 8 and 9.

7. With regard to claim 18, Baldwin discloses all aspects of the invention of claim 18 as set forth in the rejection of claim 12 with the exception of the explicit disclosure of the multiplexer/demultiplexer of claim 18. However, as set forth in the rejection of claims 1,5, and 7 the external source of said rejection is the first converter which performs multiplexing and demultiplexing as set forth in said rejection. It would therefore have been obvious to one ordinarily skilled in the art to include a multiplexer/demultiplexer with the system as disclosed by Baldwin in the rejection of claim 7 to arrive at the invention of claim 18. The motivation to do so would have been to provide some

Art Unit: 2663

physical means of performing the multiplexing/demultiplexing as disclosed by Baldwin, as they are not passive or self-executing operations, as one ordinarily skilled in the art would recognize.

8. With regard to claims 19 and 20, Baldwin discloses the invention of claim 15 and further discloses the elements of the claims 16 and 17 as shown in mapping table of fig 7 and set forth in the rejection of claims 13 and 14.

9. With regard to claim 21, Baldwin discloses a system that performs all aspects of the method of claim 21 as set forth in the rejection of claims 1 and 2 with the exception of the second AAL2 CPS packet being generated from the same AAL5 ATM cell generated by apparatus 705-1 of fig 9. However, it would have been obvious to one ordinarily skilled in the art at the time of the invention to include in the method performed by the apparatus of claims 1 and 2 and disclosed by Baldwin that the second AAL2 CPS packet is generated from the same ATM cell to arrive at the invention of claim 21. The motivation to do so would have been to accommodate an AAL2 type user on an output of the system depicted in fig 9 at the extreme left and right sides of the figure.

10. With regard to claims 23 and 24, Baldwin discloses the method of claim 21 and further discloses as set forth in the rejection of claim 3 that the apparatus perform the method steps of claim 23 and 24 via the disclosed tables.

11. With regard to claim 25, Baldwin disclose the method of claim 21 and further discloses, for reasons as set forth in the rejection of claim 5, that the apparatus perform the method step of claim 25.

Allowable Subject Matter

12. Claims 22 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Rose, et al. (US 6,396,840), Method, Interface, and System for Connecting Communication Traffic Across an Intermediate Network.
- b. Lee (US 6,829, 241), AAL-2/AAL-5 Processing Apparatus in Mobile Communication System
- c. Stacey, et al. (US 6,834,053), Distributed Traffic Scheduler
- d. Murakami, et al. (US 6,603,767), Cell Exchanging Device
- e. Nakano, et al. (US 6,574,226), Data Transmitting Method
- f. Nobuyasu, et al. (US 6,445,683) Host System for Base Station

Art Unit: 2663

g. Ostman, et al. (US 6,483,838), Combined Header Parameter Table for ATM Node


h. Duault, et al (US 6,108,336), AAL-5 SSCS for AAL-1 and AAL-2 n ATM Networks

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Heinrichs whose telephone number is 571-272-8397. The examiner can normally be reached on Monday through Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


C. Heinrichs
AU 2663


RICKY NGO
PRIMARY EXAMINER

9/15/05